

Atty. Dkt. No. 074066-0115

Listing of Claims

Please delete claims 7-35. Please add claims 36-66 as follows. The following list is complete and supercedes previous claims in the case.

1. (Original) A preservation solution for cells, tissues, and organs comprising a combination of polyglycerol and lactose in an amount effective to preserve the cells, tissues, and organs under hypothermic conditions.

2. (Original) The preservation solution of claim 1 wherein the lactose is alpha lactose.

3. (Original) The preservation solution of claim 1 wherein the polyglycerol is from n = 2 to n = 200 monomers.

4. (Original) The preservation solution of claim 1 wherein the polyglycerol is decaglycerol or hexaglycerol.

5. (Original) The preservation solution of claim 1 wherein the lactose is at a concentration from 11 mM to 250 mM.

6. (Original) The preservation solution of claim 1 wherein the polyglycerol is at a concentration of 10 mOsm to 250 mOsm.

7-35 (Cancelled)

36. (New) The preservation solution of claim 1 further comprising glutathione.

37. (New) The solution of claim 36, further comprising chondroitin sulfate.

38. (New) The solution of claim 37 wherein the chondroitin sulfate is chondroitin sulfate A.

39. (New) The solution of claim 37, wherein the concentration of chondroitin sulfate is on the order of 0.01% w/v to 1% w/v.

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40. (New) The solution of claim 37, further comprising chlorpromazine.
41. (New) The solution of claim 40, wherein the concentration of chlorpromazine is about 1-50 micrograms/ml.
42. (New) The solution of claim 41, wherein the concentration of chlorpromazine is about 2-10 micrograms/ml.
43. (New) The solution of claim 40 further comprising citrate.
44. (New) The solution of claim 43, further comprising calcium.
45. (New) The solution of claim 44, further comprising magnesium.
46. (New) The solution of claim 45, further comprising adenine.
47. (New) The solution of claim 46, further comprising glucose.
48. (New) The solution of claim 47, further comprising acetate.
49. (New) The solution of claim 48 further comprising phosphate buffer.
50. (New) The solution of claim 36, wherein the solution has an osmolality of less than about 350 mOsm.
51. (New) The solution of claim 36, wherein the sum of all impermeant species contributes 20-250 mOsm (milliosmolal) to the osmolality of the solution.
52. (New) A method for the preservation of cells, tissues, or organs under conditions of impaired cell volume homeostasis, comprising:
contacting the cells, tissues, or organs with a solution of claim 1.
53. (New) A method for the preservation of cells, tissues, or organs under conditions of impaired cell volume homeostasis, comprising:

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contacting the cells, tissues, or organs with a solution comprising polyglycerol in an amount effective to preclude or to reverse cell swelling.

54. (New) The method of claim 53 wherein the contacting is via intravenous or intra-arterial administration.

55. (New) The method of claim 53 wherein the contacting is in vivo via arterial organ perfusion or retrograde venous perfusion of an organ or vascularized tissue.

56. (New) The method of claim 53 wherein the contacting is in vitro via arterial organ perfusion or retrograde venous perfusion of an organ or vascularized tissue.

57. (New) The method of claim 53 wherein the contacting is via the immersion of or bathing of affected cells, tissues, or organs.

58. (New) The method of claim 57 wherein the lactose is alpha lactose.

59. (New) The method of claim 53 wherein the polyglycerol is from n = 2 to 200 monomer units in length.

60. (New) The method of claim 53 wherein the polyglycerol is tetraglycerol, hexaglycerol, or decaglycerol.

61. (New) The method of claim 53 wherein the polyglycerol is at a concentration of from about 20 mOsm to 1,500 mOsm when in contact with the cell, tissue, or organ.

62. (New) The method of claim 53 wherein the effective amount is an isotonic solution.

63. (New) The method of claim 53 wherein the effective amount is a hypertonic solution.

64. (New) A method for the preservation of cells, tissues, or organs under conditions of impaired cell volume homeostasis, comprising:

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contacting the cells, tissues, or organs with a solution comprising lactose in an amount effective to preclude or to reverse cell swelling.

65. (New) The method of claim 64 wherein the lactose is alpha lactose.
66. (New) The method of claim 64 wherein the lactose is at a concentration from about 11 mM to about 250 mM.